Bloodborne Pathogens

Exposure Control Program

29 CFR 1910.1030

Occupational Safety & Health Bureau

Montana Department of Labor & Industry

Prepared for Montana Employers
by the

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Bloodborne Pathogens
OSHA Standard: 29 CFR 1910.1030

Introduction

Occupational exposure to bloodborne pathogens, including the hepatitis B virus (HBV) and the human immunodeficiency virus (HIV), poses a significant risk to workers in any industry in which an injury can occur and expose workers to blood or contaminated material.

Law enforcement and health care are not the only occupations were there could be an exposure to bloodborne pathogens. Accidents can happen at any job site or workplace. Employees need to be protected in case a fellow worker has been injured and has an open wound.

Any worker who is exposed to blood or has the potential to be exposed to blood is at risk from bloodborne pathogens (BBP). Employers need to recognize this as a potential hazard and protect their employees from exposure.

Ordinarily, an occupational exposure could be reasonably anticipated in occupations such as health care and law enforcement. Still, other exposures could occur as a consequence of Acollateral duty≅, that is, they would not be reasonably anticipated as a likely occurrence in the normal course of an employee performing his or her duties.

The Occupational Safety and Health Administration (OSHA) Standard for bloodborne pathogens applies to all industries. This document provides guidelines for protecting workers from BBP as well as an overview of the OSHA standard but it is not a substitute for the standard required by OSHA. Please refer to the standard (Title 29 Code of Federal Regulations, Part 1910.1030) for the complete text and all requirements of occupational exposure to BBP.

I. Definitions

Bellow is a list of a few definitions that are needed to understand this standard; please see 1910.1030 for a complete list of definitions.

Blood means human blood, human blood components, and products made from human blood.

Bloodborne Pathogen means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, HBV and HIV.

Contaminated Sharps means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Occupational Exposure means reasonably anticipated skin, eye, mucus membrane, or parenteral contact with blood or other potentially infectious materials that my result from the performance of an employee s duties. NOTE: This definition does not cover AGood Samaritan≅ acts which result in exposure to blood or other potentially infectious materials from assisting a fellow employee but precautions must be taken to protect all employees that might be involved.

Other Potentially Infectious Materials (OPIM) means:
(1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and any body fluid contaminated with blood;

(2) Any unfixed human tissue or organ;

(3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissue from experimental animals infected with HIV or HBV.

II. Bloodborne Pathogen Exposure Control Program

A. *Written Control Plan or Policy*.

The first step in developing a BBP exposure control program is to establish a written plan or policy. This plan must address the following:

1. ***Universal Precautions Policy***. The employer must develop , implement, and enforce a Universal Precautions Policy which assumes that all human blood or blood contaminated materials are infectious for HBV, HIV, and other BBP. This policy must outline engineering and employee work practice controls to be observed to prevent contact with blood or other potentially infectious materials (OPIM).

2. ***Exposure Determination***. Consider which work activities at the worksite where there could be either occupational or collateral duty exposures of employees to blood or OPIM. List all possible worker exposures in the control policy and insure that all employees are aware of the potential exposures.

3. Schedule and Methods of Implementation.
The schedule and methods of implementation of control methods, HBV vaccinations, communication of the hazard to employees, and record keeping.

4. The procedure for evaluation of circumstances surrounding exposure incidents. The procedures for evaluating exposures should include:

! Documentation of routes,
! Circumstances under which the exposure incident occurred,

! Identification and documentation of the source individual, when feasible and allowed by law.

B. Engineering Controls.

Engineering controls reduce employee exposure in the workplace by either removing the hazard or isolating the worker from the exposure. Engineering controls must be examined and maintained, or replaced, on a scheduled basis.

Engineering controls include mechanical respiratory assists and disposable airway equipment for first aid situations. Pocket mouth-to-mouth resuscitation devices designed to isolate emergency response personnel from direct contact with fluids should be provided for workers expected to do first aid.

Some engineering controls for health care workers using sharps (sharp objects and needles) include: self-sheathing needles, non-glass capillary tubes, glass capillary tubes wrapped in puncture-resistant film, and puncture resistant sharps containers.

Employers should also provide hand washing facilities for employees when feasible.

C. Work Practice Controls.

Work practice controls alter the manner in which a task is performed. Employers must describe the work practice controls to be observed in order to prevent contact with blood or OPIM. These might include the precautions to employ if a person is to provide, as Acollateral duty≅, emergency first aid and CPR activities; the necessary personal protective equipment to use for first aid and CPR; and how to handle and dispose of blood contaminated materials. Where maintenance and custodial personnel or others are involved, procedures for cleaning up, disposal of blood and contaminated materials, and disinfection of floors or other surfaces should be outlined.

D. Personal Hygiene.

Hand washing should be required after removal of gloves following any activity where they were used as personal protective equipment against BBP. Require that hand washing with soap and running water be performed as soon as feasible, particularly in cases of gross contamination, to adequately flush contaminated material from the skin; or alternative hand washing methods when using soap and water are not feasible. Antiseptic hand cleaner, in conjunction with clean towels, or antiseptic towelettes are examples of alternative methods.

If blood or OPIM splashes into a worker s eyes they should wash them out thoroughly as soon as feasible. If a worker s street cloths become contaminated they should be changed out as soon as feasible and placed in a plastic bag to be laundered. Workers should then shower when possible if blood or OPIM have penetrated through their street cloths.

Prohibit the consumption, and storage of food and beverages, application of cosmetics, or the handling of contact lenses at locations where blood or potentially infectious materials are likely to be present.

E. Personal Protective Equipment (PPE).

In addition to instituting engineering and work practice controls, the standard requires that appropriate PPE also be used to reduce work exposure. PPE is specialized clothing or equipment worn by employees for protection from exposure to blood or other potentially infectious materials.

Employers must make readily available at no cost to the employees appropriate PPE and in the correct sizes to provide protection form blood or OPIM. Personal protective equipment will be considered Aappropriate≅ only if it does not permit blood or other potentially infectious substances to pass through to or reach an employee s clothes, skin, eyes, mouth, or other mucus membranes under normal conditions of use. Some examples of PPE include:

- Gloves
- Face shields, face masks

! Lab coats, shoe covers
! Eye protection, goggles, and glasses
! Gowns and aprons

Employers also must ensure that PPE is used correctly, properly cleaned, repaired, replace, or disposed of as needed. PPE must be removed before leaving the work area, this will limit the spread of the contamination.

Hypoallergenic gloves, glove liners, powerless gloves, or other alternatives must be provided for employees who are allergic to the gloves that are normally provided.

F. Containers and Labeling

The standard requires the labeling of all containers (bags, boxes, etc.) used for the storage, transport, or shipping of potentially hazardous or contaminated waste. Labels must include the legend BIOHAZARD and must be fluorescent orange or orange-red, with lettering or symbols in contrasting color. As part of a universal precautions program, red bags or containers may be used instead of labels. Such a plan must be written and must address the red container coding and signing of locations containing or likely to contain potentially hazardous wastes.

Employers should provide suitable and appropriately marked or otherwise distinguishable containment for wastes. Regulated waste containers must be: closable; constructed to contain all contents and prevent leakage of fluids during handling, storage, transport, or shipping; labeled or color coded in accordance with the standard; and closed prior to removal.

Sharps Containers

a. Sharp Container Requirements.

There are four major criteria to be considered for selecting or evaluating the performance of sharps disposal containers.

1. *Functionality*: Containers should remain functional during their entire usage. Containers should be durable, closable, leak resistant on sides and bottom, and puncture resistant until final disposal.

2. *Accessibility*: Containers should be accessible to workers who use, maintain, or dispose of sharp devices. They should be located as close as feasible to the immediate area where sharps are used. Carts can be used in some situations but may require a lock.

3. *Visibility*: The following should be plainly visible to workers who use the containers: the container, the degree to which it is full, the proper warning labels, and the color coding of the container.

4. *Accommodation*: Containers should be accommodating or convenient for the user and the facility and should be environmentally sound.

Employees must never reach by hand into containers of contaminated sharps. Containers for reusable sharps could be equipped with wire basket liners for easy removal during reprocessing, or employees could use tongs or forceps to withdraw the contents.

b. Handling Sharp Containers. When employees are ready to discard containers, they should first close

the lids. If there is a chance of leakage from the primary container, the employees should use a secondary container that is closable, labeled, or color coded and leak resistant.

Recapping, bending, or removing needles is permissible only if there is no feasible alternative or if required for a specific medical procedure.

G. Disposal of Contaminated Materials

All contaminated sharps shall be discarded as soon as possible in sharps containers. Disposal of all regulated waste shall be in accordance with applicable regulations of your state.

In non medical occupations materials contaminated with blood or OPIM, as in collateral duty, should be segregated at the time of the incident, double bagged in plastic bags, and disposed of with ordinary trash. Where large quantities of blood and waste are generated, there will likely be assistance from professional emergency personnel who are trained in proper handling and disposal of contaminated materials.

Laundry

Laundry contaminated with blood or OPIM must be handled as little as possible. Laundry will be placed in appropriately marked bags at the location where it was used.

Contaminated laundry must be placed and transported in bags or containers labeled or color-coded according to the standard. All employees who handle contaminated laundry will utilize personal protective equipment to prevent contact with blood or other potentially infectious materials.

If the laundry is being sent off site, then the laundry service accepting the laundry must be notified of the hazard.

H. Post-Exposure Evaluation and Follow-Up.

When the employee has an exposure incident, it should be reported to the employer as soon as feasible. All employees who have an exposure incident must be offered post-exposure evaluation and follow-up in accordance with the OSHA standard.

This follow-up will include the following:

- Documentation of the route of exposure and the circumstances related to the incident.
- If possible, the identification of the source individual. The blood of the source individual will be tested for HIV/HBV infectivity.
- Results of testing of the source individual will be made available to the exposed employee with the exposed employee informed about the applicable laws and regulations concerning disclosure of the identity and infectivity of the source individual.
- The employee will be offered the option of having their blood collected for testing of employees HIV/HBV serological status.

! The employee will be given appropriate counseling concerning precautions to take during the period after the exposure incident.

I. Hepatitis B Vaccine

All employees who have been identified as having exposure to blood or other potentially infectious materials will be offered the Hepatitis B vaccine, at no cost to the employee. The vaccine will be offered within 10 working days of their initial assignment to work involving the potential for occupational exposure to blood or OPIM unless the employee has previously had the vaccine or who wishes to submit to antibody testing which shows the employee to have sufficient immunity.

Workers who decide to decline vaccination must complete a declination form. Employers must keep these forms on file so that they know the vaccination status of everyone who is exposed to blood. At any time after a worker initially declines to receive the vaccine, he or she may opt to take it. (See Appendix B for an example HBV vaccine declination form.)

J. Training

Training for all employees will be conducted prior to initial assignment to tasks where occupational exposure may occur and annually thereafter. Employers must also provide additional training when changes such as modification of task or procedures occur or new exposures are created.

Training for employees will include at least the following and explanation of:

1) The OSHA standard for Bloodborne Pathogens;
2) Epidemiology and symptoms of bloodborne diseases;
3) Modes of transmission of BBP;
4) The employer s exposure control plan for the facility;
5) Procedures or tasks which might cause exposure to blood or OPIM at the facility;
6) Control methods which will be used at the facility to control exposures to blood or OPIM;
7) Personal Protective Equipment available and the basis for selection;
8) Information on the hepatitis B vaccine, including it safety, efficacy, administration, benefits, and that it is offered free of cost;
9) Post exposure evaluation and follow-up;
10) Signs and labels used at the facility; and
11) Actions to take in an emergency situation involving blood or OPIM.

The trainer must be knowledgeable in the subject matter and how it relates to the workplace that the training will address. Please see the OSHA standard 1910.1030 (g) (2) (ix) for training requirements for HBV and HIV Laboratories.

K. Recordkeeping

The employee shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.20.

Records must be kept for each employee with occupational exposure for the duration of employment plus 30 years, must be confidential and must include name and social security number; hepatitis B vaccination status (including dates); results of any examination, medical testing, and follow-up procedures; a copy of the health care professional s written opinion; and a copy of information provided to the health care professional. Medical records must be made available to the subject employee, anyone with consent of the employee, OSHA and NIOSH.

Training records must be maintained for three years and must include dates, contents of training program, trainer s name and qualifications, names and job title of all persons attending the session. Disposal of records must be in accord with OSHA=s standard covering access to records.

State Occupational Safety and Health Consultation Project

A source of assistance with construction and general industry safety and health is the Montana Onsite Consultation Project. This division of the Department of Labor and Industry operates independently of OSHA=s enforcement branch. The program was developed with small businesses in mind, and is available to private sector employers who want help in recognizing and correcting jobsite hazards.

When an employer uses the service, a trained occupational safety and health professional conducts a free onsite inspection and consultation. No citations or penalties are given for any of the problems that the inspector/consultant may find, and the service is completely confidential. The employer has the responsibility and obligation through the program to correct the identified hazards within an allotted amount of time. In addition, the consultant can assist in developing and maintaining an effective safety program, offer jobsite training and education for employees, and help locate other sources of assistance for safety and health concerns.

Although this program can be beneficial, you must realize that there is still no guarantee that a jobsite that has received the consultation services will "pass≅ an OSHA inspection. For information about Montana s Onsite Consultation Project please contact:

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Resources

Employers that have employees with a potential of exposure to bloodborne pathogens should have copies of the OSHA Standards . These standards should be reviewed and understood by the employer, supervisors, safety personnel, and employees with possible exposures.

Listed below are several sources for attaining OSHA Standards or CFRs as and other information about Occupational Safety and Health:

1. **The Government Printing Office (GPO)** processes all sales and distribution of the CFR. For payment by credit card, call 202-512-1800, M-F, 8 a.m. to 4 p.m. e.s.t. or fax your order to 202-512-2233, 24 hours a day. For Payment by check write to Superintendent of Documents, Attn.: New Orders, P.O. Box 371954, Pittsburgh, PA 15250-7954. For GPO Customer Service call 1- 202-512-1803.

2. U.S. Department of Labor, **Occupational Safety & Health Administration**, Public Affairs Office-Room 3647, 200 Constitution Ave., Ashington, D.C. 20210.
Phone: 1-202-693-1999.
www.osha.gov

3. **National Institute for Occupational Safety and Health**. Department of Health and Human Services, 200 Independence Ave. SW 317B, Washington, DC 20201.
Phone: 1-800-356-4674, 1-800-35-NIOSH
www.niosh.gov

Regulatory references are also available in some commercial safety catalogs.

4. Lab Safety Supply Inc., P.O. Box 1368, Janesville, WI 53547-1368.
Phone: 1-800-356-2501, Fax 1-800-393-2287
www.labsafety.com

5. J.J. Keller & Associates, Inc., 3003 W. Breezewood Lane, P.O. Box 368, Neenah, WI 54957-0368
Free safety catalog available.
Phone: 1-800-531-8899, Fax: 1-800-727-7547
www.jjkeller.com

6. Business & Legal Reports
Free safety catalogs and information.
Phone: 1-800-727-5257
www.blrproducts.com

7. Conney Safety Products, 3202 Latham Drive, P. O. Box 44190, Madison, WI 53744-4190
Free safety catalog available
Phone: 1-800-356-9100 Fax: 1-800-845-9095
www.conney.com

For any safety and health questions please call the Safety Bureau at (406) 444-6401.

Appendix A. 29 CFR 1910.1030

OSHA Regulations (Standards - 29 CFR) Bloodborne pathogens. - 1910.1030

- **Standard Number:** 1910.1030
- **Standard Title:** Bloodborne pathogens.
- **SubPart Number:** Z
- **SubPart Title:** Toxic and Hazardous Substances
- **Applicable Standard:** Applicable Standard:

(a) **Scope and Application**. This section applies to all occupational exposure to blood or other potentially infectious materials as defined by paragraph (b) of this section.

(b) **Definitions.** For purposes of this section, the following shall apply:

"**Assistant Secretary**" means the Assistant Secretary of Labor for Occupational Safety and Health, or designated representative.

"**Blood**" means human blood, human blood components, and products made from human blood.

"**Bloodborne Pathogens**" means pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

"**Clinical Laboratory**" means a workplace where diagnostic or other screening procedures are performed on blood or other potentially infectious materials.

"**Contaminated**" means the presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.

"**Contaminated Laundry**" means laundry which has been soiled with blood or other potentially infectious materials or may contain sharps.

"**Contaminated Sharps**" means any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

"**Decontamination**" means the use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or

disposal.

"**Director**" means the Director of the National Institute for Occupational Safety and Health, U.S. Department of Health and Human Services, or designated representative.

"**Engineering Controls**" means controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

"**Exposure Incident**" means a specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

"**Handwashing Facilities**" means a facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

"**Licensed Healthcare Professional**" is a person whose legally permitted scope of practice allows him or her to independently perform the activities required by paragraph (f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

"**HBV**" means hepatitis B virus.

"**HIV**" means human immunodeficiency virus.

"**Occupational Exposure**" means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

"**Other Potentially Infectious Materials**" means (1) The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood, and all body fluids in situations where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

"**Parenteral**" means piercing mucous membranes or the skin barrier through such events as needlesticks, human bites, cuts, and abrasions.

"**Personal Protective Equipment**" is specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

"**Production Facility**" means a facility engaged in industrial-scale, large-volume or high concentration production of HIV or HBV.

"**Regulated Waste**" means liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

"**Research Laboratory**" means a laboratory producing or using research-laboratory-scale amounts of HIV or HBV. Research laboratories may produce high concentrations of HIV or HBV but not in the volume found in production facilities.

"**Source Individual**" means any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee. Examples include, but are not limited to, hospital and clinic patients; clients in institutions for the developmentally disabled; trauma victims; clients of drug and alcohol treatment facilities; residents of hospices and nursing homes; human remains; and individuals who donate or sell blood or blood components.

"**Sterilize**" means the use of a physical or chemical procedure to destroy all microbial life including highly resistant bacterial endospores.

"**Universal Precautions**" is an approach to infection control. According to the concept of Universal Precautions, all human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

"**Work Practice Controls**" means controls that reduce the likelihood of exposure by altering the manner in which a task is performed (e.g., prohibiting recapping of needles by a two-handed technique).

(c) Exposure Control.

(c)(1)
Exposure Control Plan.

(c)(1)(i)
Each employer having an employee(s) with occupational exposure as defined by paragraph (b) of this section shall establish a written Exposure Control Plan designed to eliminate or minimize employee exposure.

(c)(1)(ii)
The Exposure Control Plan shall contain at least the following elements:

(c)(1)(ii)(A)
The exposure determination required by paragraph (c)(2),

(c)(1)(ii)(B)
The schedule and method of implementation for paragraphs (d) Methods of Compliance, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, (g) Communication of Hazards to Employees, and (h) Recordkeeping, of this standard, and

(c)(1)(ii)(C)
The procedure for the evaluation of circumstances surrounding exposure incidents as required by paragraph (f)(3)(i) of this standard.

(c)(1)(iii)
Each employer shall ensure that a copy of the Exposure Control Plan is accessible to employees in accordance with 29 CFR 1910.1020(e).

(c)(1)(iv)
The Exposure Control Plan shall be reviewed and updated at least annually and whenever necessary to reflect new or modified tasks and procedures which affect occupational exposure and to reflect new or revised employee positions with occupational exposure.

(c)(1)(v)
The Exposure Control Plan shall be made available to the Assistant Secretary and the Director upon request for examination and copying.

(c)(2)
Exposure Determination.

(c)(2)(i)
Each employer who has an employee(s) with occupational exposure as defined by paragraph (b) of this section shall prepare an exposure determination. This exposure determination shall contain the following:

(c)(2)(i)(A)
A list of all job classifications in which all employees in those job classifications have occupational exposure;

(c)(2)(i)(B)

A list of job classifications in which some employees have occupational exposure, and

(c)(2)(i)(C)
A list of all tasks and procedures or groups of closely related task and procedures in which occupational exposure occurs and that are performed by employees in job classifications listed in accordance with the provisions of paragraph (c)(2)(i)(B) of this standard.

(c)(2)(ii)
This exposure determination shall be made without regard to the use of personal protective equipment.

(d) Methods of Compliance.

(d)(1)
General. Universal precautions shall be observed to prevent contact with blood or other potentially infectious materials. Under circumstances in which differentiation between body fluid types is difficult or impossible, all body fluids shall be considered potentially infectious materials.

(d)(2)
Engineering and Work Practice Controls.

(d)(2)(i)
Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Where occupational exposure remains after institution of these controls, personal protective equipment shall also be used.

(d)(2)(ii)
Engineering controls shall be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

(d)(2)(iii)
Employers shall provide handwashing facilities which are readily accessible to employees.

(d)(2)(iv)
When provision of handwashing facilities is not feasible, the employer shall provide either an appropriate antiseptic hand cleanser in conjunction with clean cloth/paper towels or antiseptic towelettes. When antiseptic hand cleansers or towelettes are used, hands shall be washed with soap and running water as soon as feasible.

(d)(2)(v)
Employers shall ensure that employees wash their hands immediately or as soon as feasible after removal of gloves or other personal protective equipment.

(d)(2)(vi)
Employers shall ensure that employees wash hands and any other skin with soap and water, or flush mucous membranes with water immediately or as soon as feasible following contact of such body areas with blood or other potentially infectious materials.

(d)(2)(vii)
Contaminated needles and other contaminated sharps shall not be bent, recapped, or removed except as noted in paragraphs (d)(2)(vii)(A) and (d)(2)(vii)(B) below. Shearing or breaking of contaminated needles is prohibited.

(d)(2)(vii)(A)
Contaminated needles and other contaminated sharps shall not be bent, recapped or removed unless the employer can demonstrate that no alternative is feasible or that such action is required by a specific medical or dental procedure.

(d)(2)(vii)(B)
Such bending, recapping or needle removal must be accomplished through the use of a mechanical device or a one-handed technique.

(d)(2)(viii)
Immediately or as soon as possible after use, contaminated reusable sharps shall be placed in appropriate containers until properly reprocessed. These containers shall be:

(d)(2)(viii)(A)
puncture resistant;

(d)(2)(viii)(B)
labeled or color-coded in accordance with this standard;

(d)(2)(viii)(C)
leakproof on the sides and bottom; and

(d)(2)(viii)(D)
in accordance with the requirements set forth in paragraph

(d)(4)(ii)(E) for reusable sharps.

(d)(2)(ix)
Eating, drinking, smoking, applying cosmetics or lip balm, and handling contact lenses are prohibited in work areas where there is a reasonable likelihood of occupational exposure.

(d)(2)(x)

Food and drink shall not be kept in refrigerators, freezers, shelves, cabinets or on countertops or benchtops where blood or other potentially infectious materials are present.

(d)(2)(xi)
All procedures involving blood or other potentially infectious materials shall be performed in such a manner as to minimize splashing, spraying, spattering, and generation of droplets of these substances.

(d)(2)(xii)
Mouth pipetting/suctioning of blood or other potentially infectious materials is prohibited.

(d)(2)(xiii)
Specimens of blood or other potentially infectious materials shall be placed in a container which prevents leakage during collection, handling, processing, storage, transport, or shipping.

(d)(2)(xiii)(A)
The container for storage, transport, or shipping shall be labeled or color-coded according to paragraph (g)(1)(i) and closed prior to being stored, transported, or shipped. When a facility utilizes Universal Precautions in the handling of all specimens, the labeling/color-coding of specimens is not necessary provided containers are recognizable as containing specimens. This exemption only applies while such specimens/containers remain within the facility. Labeling or color-coding in accordance with paragraph (g)(1)(i) is required when such specimens/containers leave the facility.

(d)(2)(xiii)(B)
If outside contamination of the primary container occurs, the primary container shall be placed within a second container which prevents leakage during handling, processing, storage, transport, or shipping and is labeled or color-coded according to the requirements of this standard.

(d)(2)(xiii)(C)
If the specimen could puncture the primary container, the primary container shall be placed within a secondary container which is puncture-resistant in addition to the above characteristics.

(d)(2)(xiv)
Equipment which may become contaminated with blood or other potentially infectious materials shall be examined prior to servicing or shipping and shall be decontaminated as necessary, unless the employer can demonstrate that decontamination of such equipment or portions of such equipment is not feasible.

(d)(2)(xiv)(A)
A readily observable label in accordance with paragraph (g)(1)(i)(H) shall be attached to the equipment stating which portions remain contaminated.

(d)(2)(xiv)(B)
The employer shall ensure that this information is conveyed to all affected employees, the servicing representative, and/or the manufacturer, as appropriate, prior to handling, servicing, or shipping so that appropriate precautions will be taken.

(d)(3)
Personal Protective Equipment.

(d)(3)(i)
Provision. When there is occupational exposure, the employer shall provide, at no cost to the employee, appropriate personal protective equipment such as, but not limited to, gloves, gowns, laboratory coats, face shields or masks and eye protection, and mouthpieces, resuscitation bags, pocket masks, or other ventilation devices. Personal protective equipment will be considered "appropriate" only if it does not permit blood or other potentially infectious materials to pass through to or reach the employee's work clothes, street clothes, undergarments, skin, eyes, mouth, or other mucous membranes under normal conditions of use and for the duration of time which the protective equipment will be used.

(d)(3)(ii)
Use. The employer shall ensure that the employee uses appropriate personal protective equipment unless the employer shows that the employee temporarily and briefly declined to use personal protective equipment when, under rare and extraordinary circumstances, it was the employee's professional judgment that in the specific instance its use would have prevented the delivery of health care or public safety services or would have posed an increased hazard to the safety of the worker or co-worker. When the employee makes this judgement, the circumstances shall be investigated and documented in order to determine whether changes can be instituted to prevent such occurrences in the future.

(d)(3)(iii)
Accessibility. The employer shall ensure that appropriate personal protective equipment in the appropriate sizes is readily accessible at the worksite or is issued to employees. Hypoallergenic gloves, glove liners, powderless gloves, or other similar alternatives shall be readily accessible to those employees who are allergic to the gloves normally provided.

(d)(3)(iv)
Cleaning, Laundering, and Disposal. The employer shall clean, launder, and dispose of personal protective equipment required by paragraphs (d) and (e) of this standard, at no cost to the employee.

(d)(3)(v)
Repair and Replacement. The employer shall repair or replace personal protective equipment as needed to maintain its effectiveness, at no cost to the employee.

(d)(3)(vi)
If a garment(s) is penetrated by blood or other potentially infectious materials, the garment(s) shall be removed immediately or as soon as feasible.

(d)(3)(vii)
All personal protective equipment shall be removed prior to leaving the work area.

(d)(3)(viii)
When personal protective equipment is removed it shall be placed in an appropriately designated area or container for storage, washing, decontamination or disposal.

(d)(3)(ix)
Gloves. Gloves shall be worn when it can be reasonably anticipated that the employee may have hand contact with blood, other potentially infectious materials, mucous membranes, and non-intact skin; when performing vascular access procedures except as specified in paragraph (d)(3)(ix)(D); and when handling or touching contaminated items or surfaces.

(d)(3)(ix)(A)
Disposable (single use) gloves such as surgical or examination gloves, shall be replaced as soon as practical when contaminated or as soon as feasible if they are torn, punctured, or when their ability to function as a barrier is compromised.

(d)(3)(ix)(B)
Disposable (single use) gloves shall not be washed or decontaminated for re-use.

(d)(3)(ix)(C)
Utility gloves may be decontaminated for re-use if the integrity of the glove is not compromised. However, they must be discarded if they are cracked, peeling, torn, punctured, or exhibit other signs of deterioration or when their ability to function as a barrier is compromised.

(d)(3)(ix)(D)
If an employer in a volunteer blood donation center judges that routine gloving for all phlebotomies is not necessary then the employer shall:

(d)(3)(ix)(D)(1)
Periodically reevaluate this policy;

(d)(3)(ix)(D)(2)
Make gloves available to all employees who wish to use them for phlebotomy;

(d)(3)(ix)(D)(3)
Not discourage the use of gloves for phlebotomy; and
(d)(3)(ix)(D)(4)

Require that gloves be used for phlebotomy in the following circumstances:

[i] When the employee has cuts, scratches, or other breaks in his or her skin;
[ii] When the employee judges that hand contamination with blood may occur, for example, when performing phlebotomy on an uncooperative source individual; and
[iii] When the employee is receiving training in phlebotomy.

(d)(3)(x)
Masks, Eye Protection, and Face Shields. Masks in combination with eye protection devices, such as goggles or glasses with solid side shields, or chin-length face shields, shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, or mouth contamination can be reasonably anticipated.

(d)(3)(xi)
Gowns, Aprons, and Other Protective Body Clothing. Appropriate protective clothing such as, but not limited to, gowns, aprons, lab coats, clinic jackets, or similar outer garments shall be worn in occupational exposure situations. The type and characteristics will depend upon the task and degree of exposure anticipated.

(d)(3)(xii)
Surgical caps or hoods and/or shoe covers or boots shall be worn in instances when gross contamination can reasonably be anticipated (e.g., autopsies, orthopaedic surgery).

(d)(4)
Housekeeping.

(d)(4)(i)
General. Employers shall ensure that the worksite is maintained in a clean and sanitary condition. The employer shall determine and implement an appropriate written schedule for cleaning and method of decontamination based upon the location within the facility, type of surface to be cleaned, type of soil present, and tasks or procedures being performed in the area.

(d)(4)(ii)
All equipment and environmental and working surfaces shall be cleaned and decontaminated after contact with blood or other potentially infectious materials.

(d)(4)(ii)(A)
Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures; immediately or as soon as feasible when surfaces are overtly contaminated or after any spill of blood or other potentially infectious materials; and at the end of the work shift if the surface may have become contaminated since the last cleaning.

(d)(4)(ii)(B)

Protective coverings, such as plastic wrap, aluminum foil, or imperviously-backed absorbent paper used to cover equipment and environmental surfaces, shall be removed and replaced as soon as feasible when they become overtly contaminated or at the end of the workshift if they may have become contaminated during the shift.

(d)(4)(ii)(C)
All bins, pails, cans, and similar receptacles intended for reuse which have a reasonable likelihood for becoming contaminated with blood or other potentially infectious materials shall be inspected and decontaminated on a regularly scheduled basis and cleaned and decontaminated immediately or as soon as feasible upon visible contamination.

(d)(4)(ii)(D)
Broken glassware which may be contaminated shall not be picked up directly with the hands. It shall be cleaned up using mechanical means, such as a brush and dustpan, tongs, or forceps.

(d)(4)(ii)(E)
Reusable sharps that are contaminated with blood or other potentially infectious materials shall not be stored or processed in a manner that requires employees to reach by hand into the containers where these sharps have been placed.

(d)(4)(iii)
Regulated Waste.

(d)(4)(iii)(A)
Contaminated Sharps Discarding and Containment.

(d)(4)(iii)(A)(1)
Contaminated sharps shall be discarded immediately or as soon as feasible in containers that are:

[a] Closable;
[b] Puncture resistant;
[c] Leakproof on sides and bottom; and
[d] Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard.

(d)(4)(iii)(A)(2)
During use, containers for contaminated sharps shall be:

[a] Easily accessible to personnel and located as close as is feasible to the immediate area where sharps are used or can be reasonably anticipated to be found (e.g., laundries);

[b] Maintained upright throughout use; and

[c] Replaced routinely and not be allowed to overfill.

(d)(4)(iii)(A)(3)
When moving containers of contaminated sharps from the area of use, the containers shall be:

[a] Closed immediately prior to removal or replacement to prevent spillage or protrusion of contents during handling, storage, transport, or shipping;

[b] Placed in a secondary container if leakage is possible. The second container shall be:

[i] Closable;

[ii] Constructed to contain all contents and prevent leakage during handling, storage, transport, or shipping; and

[iii] Labeled or color-coded according to paragraph (g)(1)(i) of this standard.

(d)(4)(iii)(A)(4)
Reusable containers shall not be opened, emptied, or cleaned manually or in any other manner which would expose employees to the risk of percutaneous injury.

(d)(4)(iii)(B)
Other Regulated Waste Containment.

(d)(4)(iii)(B)(1)
Regulated waste shall be placed in containers which are:

[a] Closable;

[b] Constructed to contain all contents and prevent leakage of fluids during handling, storage, transport or shipping;

[c] Labeled or color-coded in accordance with paragraph (g)(1)(i) this standard; and

[d] Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(d)(4)(iii)(B)(2)
If outside contamination of the regulated waste container occurs, it shall be placed in a second container. The second container shall be:

[a] Closable;

[b] Constructed to contain all contents and prevent leakage of fluids during handling, storage,

transport or shipping;

[c] Labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard; and

[d] Closed prior to removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping.

(d)(4)(iii)(C)
Disposal of all regulated waste shall be in accordance with applicable regulations of the United States, States and Territories, and political subdivisions of States and Territories.

(d)(4)(iv)
Laundry.

(d)(4)(iv)(A)
Contaminated laundry shall be handled as little as possible with a minimum of agitation.

(d)(4)(iv)(A)(1)
Contaminated laundry shall be bagged or containerized at the location where it was used and shall not be sorted or rinsed in the location of use.

(d)(4)(iv)(A)(2)
Contaminated laundry shall be placed and transported in bags or containers labeled or color-coded in accordance with paragraph (g)(1)(i) of this standard. When a facility utilizes Universal Precautions in the handling of all soiled laundry, alternative labeling or color-coding is sufficient if it permits all employees to recognize the containers as requiring compliance with Universal Precautions.

(d)(4)(iv)(A)(3)
Whenever contaminated laundry is wet and presents a reasonable likelihood of soak-through of or leakage from the bag or container, the laundry shall be placed and transported in bags or containers which prevent soak-through and/or leakage of fluids to the exterior.

(d)(4)(iv)(B)
The employer shall ensure that employees who have contact with contaminated laundry wear protective gloves and other appropriate personal protective equipment.

(d)(4)(iv)(C)
When a facility ships contaminated laundry off-site to a second facility which does not utilize Universal Precautions in the handling of all laundry, the facility generating the contaminated laundry must place such laundry in bags or containers which are labeled or color-coded in accordance with paragraph (g)(1)(i).

(e) HIV and HBV Research Laboratories and Production Facilities.

(e)(1)
This paragraph applies to research laboratories and production facilities engaged in the culture, production, concentration, experimentation, and manipulation of HIV and HBV. It does not apply to clinical or diagnostic laboratories engaged solely in the analysis of blood, tissues, or organs. These requirements apply in addition to the other requirements of the standard.

(e)(2)
Research laboratories and production facilities shall meet the following criteria:

(e)(2)(i)
Standard Microbiological Practices. All regulated waste shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(e)(2)(ii)
Special Practices

(e)(2)(ii)(A)
Laboratory doors shall be kept closed when work involving HIV or HBV is in progress.

(e)(2)(ii)(B)
Contaminated materials that are to be decontaminated at a site away from the work area shall be placed in a durable, leakproof, labeled or color-coded container that is closed before being removed from the work area.

(e)(2)(ii)(C)
Access to the work area shall be limited to authorized persons. Written policies and procedures shall be established whereby only persons who have been advised of the potential biohazard, who meet any specific entry requirements, and who comply with all entry and exit procedures shall be allowed to enter the work areas and animal rooms.

(e)(2)(ii)(D)
When other potentially infectious materials or infected animals are present in the work area or containment module, a hazard warning sign incorporating the universal biohazard symbol shall be posted on all access doors. The hazard warning sign shall comply with paragraph (g)(1)(ii) of this standard.

(e)(2)(ii)(E)
All activities involving other potentially infectious materials shall be conducted in biological safety cabinets or other physical-containment devices within the containment module. No work with these other potentially infectious materials shall be conducted on the open bench.
(e)(2)(ii)(F)

Laboratory coats, gowns, smocks, uniforms, or other appropriate protective clothing shall be used in the work area and animal rooms. Protective clothing shall not be worn outside of the work area and shall be decontaminated before being laundered.

(e)(2)(ii)(G)
Special care shall be taken to avoid skin contact with other potentially infectious materials. Gloves shall be worn when handling infected animals and when making hand contact with other potentially infectious materials is unavoidable.

(e)(2)(ii)(H)
Before disposal all waste from work areas and from animal rooms shall either be incinerated or decontaminated by a method such as autoclaving known to effectively destroy bloodborne pathogens.

(e)(2)(ii)(I)
Vacuum lines shall be protected with liquid disinfectant traps and high-efficiency particulate air (HEPA) filters or filters of equivalent or superior efficiency and which are checked routinely and maintained or replaced as necessary.

(e)(2)(ii)(J)
Hypodermic needles and syringes shall be used only for parenteral injection and aspiration of fluids from laboratory animals and diaphragm bottles. Only needle-locking syringes or disposable syringe-needle units (i.e., the needle is integral to the syringe) shall be used for the injection or aspiration of other potentially infectious materials. Extreme caution shall be used when handling needles and syringes. A needle shall not be bent, sheared, replaced in the sheath or guard, or removed from the syringe following use. The needle and syringe shall be promptly placed in a puncture-resistant container and autoclaved or decontaminated before reuse or disposal.

(e)(2)(ii)(K)
All spills shall be immediately contained and cleaned up by appropriate professional staff or others properly trained and equipped to work with potentially concentrated infectious materials.

(e)(2)(ii)(L)
A spill or accident that results in an exposure incident shall be immediately reported to the laboratory director or other responsible person.

(e)(2)(ii)(M)
A biosafety manual shall be prepared or adopted and periodically reviewed and updated at least annually or more often if necessary. Personnel shall be advised of potential hazards, shall be required to read instructions on practices and procedures, and shall be required to follow them.

(e)(2)(iii)
Containment Equipment.

(e)(2)(iii)(A)
Certified biological safety cabinets (Class I, II, or III) or other appropriate combinations of personal protection or physical containment devices, such as special protective clothing, respirators, centrifuge safety cups, sealed centrifuge rotors, and containment caging for animals, shall be used for all activities with other potentially infectious materials that pose a threat of exposure to droplets, splashes, spills, or aerosols.

(e)(2)(iii)(B)
Biological safety cabinets shall be certified when installed, whenever they are moved and at least annually.

(e)(3)
HIV and HBV research laboratories shall meet the following criteria:

(e)(3)(i)
Each laboratory shall contain a facility for hand washing and an eye wash facility which is readily available within the work area.

(e)(3)(ii)
An autoclave for decontamination of regulated waste shall be available.

(e)(4)
HIV and HBV production facilities shall meet the following criteria:

(e)(4)(i)
The work areas shall be separated from areas that are open to unrestricted traffic flow within the building. Passage through two sets of doors shall be the basic requirement for entry into the work area from access corridors or other contiguous areas. Physical separation of the high-containment work area from access corridors or other areas or activities may also be provided by a double-doored clothes-change room (showers may be included), airlock, or other access facility that requires passing through two sets of doors before entering the work area.

(e)(4)(ii)
The surfaces of doors, walls, floors and ceilings in the work area shall be water-resistant so that they can be easily cleaned. Penetrations in these surfaces shall be sealed or capable of being sealed to facilitate decontamination.

(e)(4)(iii)
Each work area shall contain a sink for washing hands and a readily available eye wash facility. The sink shall be foot, elbow, or automatically operated and shall be located near the exit door of the work area.

(e)(4)(iv)
Access doors to the work area or containment module shall be self-closing.

(e)(4)(v)
An autoclave for decontamination of regulated waste shall be available within or as near as possible to the work area.

(e)(4)(vi)
A ducted exhaust-air ventilation system shall be provided. This system shall create directional airflow that draws air into the work area through the entry area. The exhaust air shall not be recirculated to any other area of the building, shall be discharged to the outside, and shall be dispersed away from occupied areas and air intakes. The proper direction of the airflow shall be verified (i.e., into the work area).

(e)(5)
Training Requirements. Additional training requirements for employees in HIV and HBV research laboratories and HIV and HBV production facilities are specified in paragraph (g)(2)(ix).

(f) Hepatitis B Vaccination and Post-exposure Evaluation and Follow-up.

(f)(1)
General.

(f)(1)(i)
The employer shall make available the hepatitis B vaccine and vaccination series to all employees who have occupational exposure, and post-exposure evaluation and follow-up to all employees who have had an exposure incident.

(f)(1)(ii)
The employer shall ensure that all medical evaluations and procedures including the hepatitis B vaccine and vaccination series and post-exposure evaluation and follow-up, including prophylaxis, are:

(f)(1)(ii)(A)
Made available at no cost to the employee;

(f)(1)(ii)(B)
Made available to the employee at a reasonable time and place;

(f)(1)(ii)(C)
Performed by or under the supervision of a licensed physician or by or under the supervision of

another licensed healthcare professional; and

(f)(1)(ii)(D)
Provided according to recommendations of the U.S. Public Health Service current at the time these evaluations and procedures take place, except as specified by this paragraph (f).

(f)(1)(iii)
The employer shall ensure that all laboratory tests are conducted by an accredited laboratory at no cost to the employee.

(f)(2)
Hepatitis B Vaccination.

(f)(2)(i)
Hepatitis B vaccination shall be made available after the employee has received the training required in paragraph (g)(2)(vii)(I) and within 10 working days of initial assignment to all employees who have occupational exposure unless the employee has previously received the complete hepatitis B vaccination series, antibody testing has revealed that the employee is immune, or the vaccine is contraindicated for medical reasons.

(f)(2)(ii)
The employer shall not make participation in a prescreening program a prerequisite for receiving hepatitis B vaccination.

(f)(2)(iii)
If the employee initially declines hepatitis B vaccination but at a later date while still covered under the standard decides to accept the vaccination, the employer shall make available hepatitis B vaccination at that time.

(f)(2)(iv)
The employer shall assure that employees who decline to accept hepatitis B vaccination offered by the employer sign the statement in Appendix A.

(f)(2)(v)
If a routine booster dose(s) of hepatitis B vaccine is recommended by the U.S. Public Health Service at a future date, such booster dose(s) shall be made available in accordance with section (f)(1)(ii).

(f)(3)
Post-exposure Evaluation and Follow-up. Following a report of an exposure incident, the employer shall make immediately available to the exposed employee a confidential medical evaluation and follow-up, including at least the following elements:

(f)(3)(i)
Documentation of the route(s) of exposure, and the circumstances under which the exposure incident occurred;

(f)(3)(ii)
Identification and documentation of the source individual, unless the employer can establish that identification is infeasible or prohibited by state or local law;

(f)(3)(ii)(A)
The source individual's blood shall be tested as soon as feasible and after consent is obtained in order to determine HBV and HIV infectivity. If consent is not obtained, the employer shall establish that legally required consent cannot be obtained. When the source individual's consent is not required by law, the source individual's blood, if available, shall be tested and the results documented.

(f)(3)(ii)(B)
When the source individual is already known to be infected with HBV or HIV, testing for the source individual's known HBV or HIV status need not be repeated.

(f)(3)(ii)(C)
Results of the source individual's testing shall be made available to the exposed employee, and the employee shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

(f)(3)(iii)
Collection and testing of blood for HBV and HIV serological status;

(f)(3)(iii)(A)
The exposed employee's blood shall be collected as soon as feasible and tested after consent is obtained.

(f)(3)(iii)(B)
If the employee consents to baseline blood collection, but does not give consent at that time for HIV serologic testing, the sample shall be preserved for at least 90 days. If, within 90 days of the exposure incident, the employee elects to have the baseline sample tested, such testing shall be done as soon as feasible.

(f)(3)(iv)
Post-exposure prophylaxis, when medically indicated, as recommended by the U.S. Public Health Service;
(f)(3)(v)
Counseling; and

(f)(3)(vi)
Evaluation of reported illnesses.

(f)(4)
Information Provided to the Healthcare Professional.

(f)(4)(i)
The employer shall ensure that the healthcare professional responsible for the employee's Hepatitis B vaccination is provided a copy of this regulation.

(f)(4)(ii)
The employer shall ensure that the healthcare professional evaluating an employee after an exposure incident is provided the following information:

(f)(4)(ii)(A)
A copy of this regulation;

(f)(4)(ii)(B)
A description of the exposed employee's duties as they relate to the exposure incident;

(f)(4)(ii)(C)
Documentation of the route(s) of exposure and circumstances under which exposure occurred;

(f)(4)(ii)(D)
Results of the source individual's blood testing, if available; and

(f)(4)(ii)(E)
All medical records relevant to the appropriate treatment of the employee including vaccination status which are the employer's responsibility to maintain.

(f)(5)
Healthcare Professional's Written Opinion. The employer shall obtain and provide the employee with a copy of the evaluating healthcare professional's written opinion within 15 days of the completion of the evaluation.

(f)(5)(i)
The healthcare professional's written opinion for Hepatitis B vaccination shall be limited to whether Hepatitis B vaccination is indicated for an employee, and if the employee has received such vaccination.

(f)(5)(ii)
The healthcare professional's written opinion for post-exposure evaluation and follow-up shall be

limited to the following information:

(f)(5)(ii)(A)
That the employee has been informed of the results of the evaluation; and

(f)(5)(ii)(B)
That the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials which require further evaluation or treatment.

(f)(5)(iii)
All other findings or diagnoses shall remain confidential and shall not be included in the written report.

(f)(6)
Medical Recordkeeping. Medical records required by this standard shall be maintained in accordance with paragraph
(h)(1) of this section.

(g) <u>Communication of Hazards to Employees</u>.

(g)(1)
Labels and Signs.

(g)(1)(i)
Labels.

(g)(1)(i)(A)
Warning labels shall be affixed to containers of regulated waste, refrigerators and freezers containing blood or other potentially infectious material; and other containers used to store, transport or ship blood or other potentially infectious materials, except as provided in paragraph (g)(1)(i)(E), (F) and (G).

(g)(1)(i)(B)
Labels required by this section shall include the following legend:
BIOHAZARD
(g)(1)(i)(C)
These labels shall be fluorescent orange or orange-red or predominantly so, with lettering and symbols in a contrasting color.

(g)(1)(i)(D)
Labels shall be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

(g)(1)(i)(E)
Red bags or red containers may be substituted for labels.

(g)(1)(i)(F)
Containers of blood, blood components, or blood products that are labeled as to their contents and have been released for transfusion or other clinical use are exempted from the labeling requirements of paragraph (g).

(g)(1)(i)(G)
Individual containers of blood or other potentially infectious materials that are placed in a labeled container during storage, transport, shipment or disposal are exempted from the labeling requirement.

(g)(1)(i)(H)
Labels required for contaminated equipment shall be in accordance with this paragraph and shall also state which portions of the equipment remain contaminated.

(g)(1)(i)(I)
Regulated waste that has been decontaminated need not be labeled or color-coded.

(g)(1)(ii)
Signs.

(g)(1)(ii)(A)
The employer shall post signs at the entrance to work areas specified in paragraph (e), HIV and HBV Research Laboratory and Production Facilities, which shall bear the following legend:

BIOHAZARD

(Name of the Infectious Agent)
(Special requirements for entering the area)

(Name, telephone number of the laboratory director or other responsible person.)

(g)(1)(ii)(B)
These signs shall be fluorescent orange-red or predominantly so, with lettering and symbols in a contrasting color.

(g)(2)
Information and Training.
(g)(2)(i)

Employers shall ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

(g)(2)(ii)
Training shall be provided as follows:

(g)(2)(ii)(A)
At the time of initial assignment to tasks where occupational exposure may take place;

(g)(2)(ii)(B)
Within 90 days after the effective date of the standard; and

(g)(2)(ii)(C)
At least annually thereafter.

(g)(2)(iii)
For employees who have received training on bloodborne pathogens in the year preceding the effective date of the standard, only training with respect to the provisions of the standard which were not included need be provided.

(g)(2)(iv)
Annual training for all employees shall be provided within one year of their previous training.

(g)(2)(v)
Employers shall provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

(g)(2)(vi)
Material appropriate in content and vocabulary to educational level, literacy, and language of employees shall be used.

(g)(2)(vii)
The training program shall contain at a minimum the following elements:

(g)(2)(vii)(A)
An accessible copy of the regulatory text of this standard and an explanation of its contents;

(g)(2)(vii)(B)
A general explanation of the epidemiology and symptoms of bloodborne diseases;

(g)(2)(vii)(C)

An explanation of the modes of transmission of bloodborne pathogens;

(g)(2)(vii)(D)
An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan;

(g)(2)(vii)(E)
An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials;

(g)(2)(vii)(F)
An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment;

(g)(2)(vii)(G)
Information on the types, proper use, location, removal, handling, decontamination and disposal of personal protective equipment;

(g)(2)(vii)(H)
An explanation of the basis for selection of personal protective equipment;

(g)(2)(vii)(I)
Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge;

(g)(2)(vii)(J)
Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials;

(g)(2)(vii)(K)
An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available;

(g)(2)(vii)(L)
Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident;

(g)(2)(vii)(M)
An explanation of the signs and labels and/or color coding required by paragraph (g)(1); and

(g)(2)(vii)(N)

An opportunity for interactive questions and answers with the person conducting the training session.

(g)(2)(viii)
The person conducting the training shall be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

(g)(2)(ix)
Additional Initial Training for Employees in HIV and HBV Laboratories and Production Facilities. Employees in HIV or HBV research laboratories and HIV or HBV production facilities shall receive the following initial training in addition to the above training requirements.

(g)(2)(ix)(A)
The employer shall assure that employees demonstrate proficiency in standard microbiological practices and techniques and in the practices and operations specific to the facility before being allowed to work with HIV or HBV.

(g)(2)(ix)(B)
The employer shall assure that employees have prior experience in the handling of human pathogens or tissue cultures before working with HIV or HBV.

(g)(2)(ix)(C)
The employer shall provide a training program to employees who have no prior experience in handling human pathogens. Initial work activities shall not include the handling of infectious agents. A progression of work activities shall be assigned as techniques are learned and proficiency is developed. The employer shall assure that employees participate in work activities involving infectious agents only after proficiency has been demonstrated.

(h) Recordkeeping.

(h)(1)
Medical Records.

(h)(1)(i)
The employer shall establish and maintain an accurate record for each employee with occupational exposure, in accordance with 29 CFR 1910.1020.

(h)(1)(ii)
This record shall include:

(h)(1)(ii)(A)
The name and social security number of the employee;

(h)(1)(ii)(B)
A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required by paragraph (f)(2);

(h)(1)(ii)(C)
A copy of all results of examinations, medical testing, and follow-up procedures as required by paragraph (f)(3);

(h)(1)(ii)(D)
The employer's copy of the healthcare professional's written opinion as required by paragraph; and

(h)(1)(ii)(E)
A copy of the information provided to the healthcare professional as required by paragraphs

(f)(4)(ii)(B)(C) and (D).

(h)(1)(iii)
Confidentiality. The employer shall ensure that employee medical records required by paragraph are:

(h)(1)(iii)(A)
Kept confidential; and

(h)(1)(iii)(B)
Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as required by this section or as may be required by law.

(h)(1)(iv)
The employer shall maintain the records required by paragraph (h) for at least the duration of employment plus 30 years in accordance with 29 CFR 1910.1020.

(h)(2)
Training Records.

(h)(2)(i)
Training records shall include the following information:

(h)(2)(i)(A)
The dates of the training sessions;

(h)(2)(i)(B)
The contents or a summary of the training sessions;

(h)(2)(i)(C)
The names and qualifications of persons conducting the training; and

(h)(2)(i)(D)
The names and job titles of all persons attending the training sessions.

(h)(2)(ii)
Training records shall be maintained for 3 years from the date on which the training occurred.

(h)(3)
Availability.

(h)(3)(i)
The employer shall ensure that all records required to be maintained by this section shall be made available upon request to the Assistant Secretary and the Director for examination and copying.

(h)(3)(ii)
Employee training records required by this paragraph shall be provided upon request for examination and copying to employees, to employee representatives, to the Director, and to the Assistant Secretary.
(h)(3)(iii)
Employee medical records required by this paragraph shall be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, to the Director, and to the Assistant Secretary in accordance with 29 CFR 1910.1020.

(h)(4)
Transfer of Records.

(h)(4)(i)
The employer shall comply with the requirements involving transfer of records set forth in 29 CFR 1910.1020(h).

(h)(4)(ii)
If the employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, the employer shall notify the Director, at least three months prior to their disposal and transmit them to the Director, if required by the Director to do so, within that three month period.

(i) <u>Dates.</u>

(i)(1)
Effective Date. The standard shall become effective on March 6, 1992.

(i)(2)
The Exposure Control Plan required by paragraph (c) of this section shall be completed on or before May 5, 1992.

(i)(3)
Paragraph (g)(2) Information and Training and (h) Recordkeeping shall take effect on or before June 4, 1992.

(i)(4)
Paragraphs (d)(2) Engineering and Work Practice Controls, (d)(3) Personal Protective Equipment, (d)(4) Housekeeping, (e) HIV and HBV Research Laboratories and Production Facilities, (f) Hepatitis B Vaccination and Post-Exposure Evaluation and Follow-up, and (g)(1) Labels and Signs, shall take effect July 6, 1992.

1910.1030 Bloodborne Pathogens. 5 August, 1999

Appendix B. Hepatitis B Vaccine Declination Example Form.

Hepatitis B Vaccine Declination Form

Employee Name: _____ Date: _____
Address: _____
Phone Number: _____
Company: _____ Job Title: _____
Job Duties: _____

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time.

I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Employee Signature: _____ Date: _____